



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,127	03/02/2000	Scott E. Moore	MI22-1246	4844

21567 7590 04/07/2006
WELLS ST. JOHN P.S.
601 W. FIRST AVENUE, SUITE 1300
SPOKANE, WA 99201

EXAMINER

ELEY, TIMOTHY V

ART UNIT PAPER NUMBER

3724

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/517,127	Applicant(s) MOORE ET AL.	
	Examiner Timothy V. Eley	Art Unit 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) See Continuation Sheet is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 10 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/9/06</u> | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1-5,10-20,22-28,31-33,39,41-65,67,130,131,133-135,138-144 and 152-181.

Continuation of Disposition of Claims: Claims allowed are 27,28,31-33,41-62,133-135,139,143,152,153,157-159,165-167,170,173,177 and 179-181.

Continuation of Disposition of Claims: Claims rejected are 1-5,11-20,22-26,63,64,130,131,138,140-142,144,154-156,160-164,168,169,171,172,174-176 and 178.

Art Unit: 3724

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-5, 11-20, 22-26, 63, 64, 67, 130, 131, 138, 140-142, 144, 154-156, 160-164, 168, 169, 171, 172, 174-176, and 178 are rejected under 35 U.S.C. 102(a) as being anticipated by Yueh et al, as applied in the rejection filed September 08, 2005.

- Regarding claim 18, the sensor is coupled with the sampling system and configured to output a signal indicative of turbidity of the sample(in tank 29) of the process fluid.
- Regarding claims 22, 171, 172, 174-176, and 178, the sensor is configured to monitor a percentage of solids present in a liquid of the process fluid to provide information regarding the turbidity of the process fluid. Since turbidity is a determination of the physical nature, amount, etc. of solids in a liquid, the percentage of solids present is therefore monitored. Note, applicant does not recite that the exact percentage of solids is determined, and thus any solids monitored is a percentage of the liquid.
- Regarding claim 63, the sensor is configured to output a signal indicative of the turbidity of the semiconductor workpiece process fluid.

Art Unit: 3724

- Regarding claims 138,139,and 141, the sensor is configured to output a signal indicative of turbidity of the semiconductor workpiece process fluid.
- Regarding claim 142 the sensor is configured to output a signal indicative of one of the components of the semiconductor workpiece process fluid(the particles), and the metering device(35,49) is control by the control system to control a flow rate of the one of the components responsive to the signal.
- Regarding claim 169, the control system is configured to control a flow rate of the process fluid into the process chamber responsive to the comparison by using device 35.

Response to Arguments

3. Applicant's arguments filed January 09, 2006 have been fully considered but they are not persuasive.

- Applicant argues that Yueh fails to disclose any teaching regarding turbidity.
 - o In Merriam-Webster Online Dictionary(at <http://www.m-w.com/dictionary/turbidity>), "turbid" is defined as: **2 a :** deficient in clarity or purity. Also, it should be noted that applicant refers to turbidity as: "a percentage of solids present" (see claim 171 in particular). Yueh discloses that "the particle concentration is monitored, . . . and the mixed is brought to a desired concentration."(see column 2, lines 32-34). Therefore, the

Art Unit: 3724

monitoring of the particle concentration most definitely relates to "turbidity", since the presents of particles provides a deficiency in clarity or purity of the slurry. Furthermore, the monitoring of the particle concentration is essentially the same as monitoring "a percent of solids present" in the slurry, since "monitoring" a percent of solids present in the fluid would imply that the process only checks for particles in the slurry. The sensor 31 ensures that the amount of colloidal silica oxide particles introduced into tank 29 properly brings the mix in the tank into the desired log normal distribution characteristic of the new slurry(column 4, lines 1-5); thus the sensor does indeed monitor a percentage of solids present in the process fluid.

- Applicant argues that Yueh does not disclose a sampling system and is not configured to provide the process fluid in a substantially static state and the tank is clearly disclosed as a recycle tank.
 - o In Merriam-Webster Online Dictionary(at <http://www.m-w.com/dictionary/turbidity>), "sample" is defined as: 1 : a representative part or a single item from a larger whole or group especially when presented for inspection or shown as evidence of quality. Tank 29 is a recycle tank that contains fluid which is monitored as a "sample"(part of a larger whole or group, see column 3, lines 1-13), and the

Art Unit: 3724

fluid includes other parts, such as fresh slurry(see column 3, lines 46-54), and therefore the tank 29 may be interpreted to include a sample of the process fluid. Also, the fluid inherently would be measured in a static state since clearly if the agitator is being used, the sensor 31 would not be able to adequately record particle data(see column 3, lines 14-37).

Allowable Subject Matter

4. Claims 10 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 27,28,31-33,39,41-62,133-135,139,143,152,153,157-159,165-167,170,173,177, and 179-181 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action

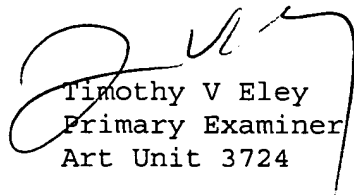
Art Unit: 3724

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V. Eley whose telephone number is 571-272-4506. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Timothy V Eley
Primary Examiner
Art Unit 3724

tve